

NON-TROPICAL SHELF CARBONATES—MODERN AND ANCIENT

Edited by:

C.S. NELSON

Department of Earth Sciences, University of Waikato, Hamilton 2001, New Zealand

Contents

Introduction

An introductory perspective on non-tropical shelf carbonates

C.S. Nelson (Hamilton, New Zealand) 3

Modern examples

Sediments and history of the Rottneest Shelf, southwest Australia: a swell-dominated, non-tropical carbonate margin

L.B. Collins (Perth, W.A., Australia) 15

The Holocene non-tropical coastal and shelf carbonate province of southern Australia

V.A. Gostin (Adelaide, S.A., Australia), A.P. Belperio (Eastwood, S.A., Australia) and J.H. Cann (Salisbury East, S.A., Australia) 51

Non-tropical carbonate deposits on the modern New Zealand shelf

C.S. Nelson, S.L. Keane and P.S. Head (Hamilton, New Zealand) 71

A model for temporal changes in the faunal composition of shell gravels during a transgression on the continental shelf around the British Isles

J.B. Wilson (Wormley, U.K.) 95

The environments of production and deposition of calcareous sediments on the shelf west of Scotland

T.P. Scoffin (Edinburgh, Scotland) 107

The facies distribution of carbonate sediments on Porcupine Bank, northeast Atlantic

T.P. Scoffin (Edinburgh, Scotland) and G.E. Bowes (Glasgow, Scotland). 125

Ancient examples

A mid-Ordovician temperate carbonate shelf—the Black River and Trenton Limestone Groups of southern Ontario, Canada

M.E. Brookfield (Guelph, Ont., Canada) 137

Permian limestone in the southeastern Bowen Basin, Queensland: an example of temperate carbonate deposition

J.J. Draper (Brisbane, Qld., Australia) 155

Paleoclimate of some Permo-Triassic carbonates of Malaysia

C.P. Rao (Hobart, Tasmania, Australia) 163

Barnacle-dominated limestone with giant cross-beds in a non-tropical, tide-swept, Pliocene forearc seaway, Hawke's Bay, New Zealand

P.J.J. Kamp (Hamilton, New Zealand), F.J. Harmsen (Fresno, Calif., U.S.A.), C.S. Nelson and S.F. Boyle (Hamilton, New Zealand) 173

Cenozoic algal biostromes in the eastern Veneto (northern Italy): a possible example of non-tropical carbonate sedimentation

L. Scudeler Baccelle and S. Reato (Padova, Italy) 197

Diagenetic aspects and carbonate muds

Diagenetic alterations in temperate shelf carbonates from southeastern Australia

S.A. Reeckmann (Sydney, N.S.W., Australia) 209

Oxygen and carbon isotope composition of cold-water Berriedale Limestone (Lower Permian), Tasmania, Australia

C.P. Rao (Hobart, Tasmania, Australia) 221

Burial-dominated cementation in non-tropical carbonates of the Oligocene Te Kuiti Group, New Zealand

C.S. Nelson, G.J. Harris (Hamilton, New Zealand) and H.R. Young (Brandon, Man., Canada) 233

Endolithic biodegradation of cool-water skeletal carbonates on Scott shelf, northwestern Vancouver Island, Canada

H.R. Young (Brandon, Man., Canada) and C.S. Nelson (Hamilton, New Zealand) 251

Carbonate mud sedimentation on a temperate shelf: Bass Basin, southeastern Australia W.M. Blom and D.B. Alsop (Sydney, N.S.W., Australia)	269
Bioerosion and carbonate mud production on high-latitude shelves G.E. Farrow and J.A. Fyfe (Edinburgh, Scotland)	281
<i>Special aspects</i>	
Application of bryozoan zoarial growth-form studies in facies analysis of non-tropical carbonate deposits in New Zealand C.S. Nelson (Hamilton, New Zealand), F.M. Hyden (Dunedin, New Zealand), S.L. Keane (Hamilton, New Zealand), W.L. Leask and D.P. Gordon (Wellington, New Zealand)	301
Preliminary steps toward formation of a generalized budget for cold-water carbonates A.M. Smith (Cambridge, Mass., U.S.A.)	323
Carbonate lithofacies as paleolatitude indicators: problems and limitations G. Carannante (Napoli, Italy), M. Esteban (London, U.K.), J.D. Milliman (Woods Hole, Mass., U.S.A.) and L. Simone (Napoli, Italy)	333
The fate of foramol ("temperate-type") carbonate platforms L. Simone and G. Carannante (Napoli, Italy)	347
Occurrence of rhodolites in the tropical Pacific—a consequence of Mid-Miocene paleo-oceanographic change F.G. Bourrouilh-Le Jan (Pau, France) and L.C. Hottinger (Basel, Switzerland)	355